

# 昆 虫 学 报

KUNCHONG XUEBAO

第 61 卷 第 1 ~ 12 期

## 总 目 录

### 研究论文

#### ✧ 生理与生化

- 36 中华按蚊血红蛋白过氧化物酶家族基因的全基因组鉴定、特征和进化  
尹华春, 张莉娟, 陈 斌
- 48 中华按蚊  $\alpha$ -羧酸酯酶 AsAe7 的异源表达、纯化与结晶  
张甜甜, 苗 娅, 许柏英, 陈 斌
- 59 中华按蚊谷胱甘肽-S-转移酶 E6(AsGSTe6) 的表达纯化与结晶  
苗 娅, 张甜甜, 许柏英, 陈 斌
- 68 冈比亚按蚊犬尿氨酸甲酰胺酶抑制剂的虚拟筛选  
宋帅葆, 艾上杰, 关 怀, 韩 谦
- 79 一株新的致倦库蚊细胞系的建立与鉴定  
罗 岚, 崔 峰
- 149 异位表达 *Dichaete* 对果蝇足部发育的影响及其作用机制  
董 玮, 孔 悦, 马恩波, 张建珍, 张 敏, 张徐波
- 156 烟蚜若蚜及有翅和无翅成蚜转录组及翅型相关基因的表达差异分析  
张 超, 杨 洪, 杨茂发, 喻会平, 代园凤
- 168 绿豆象触角转录组及嗅觉相关基因的分析  
郑海霞, 张耀文, 张仙红, 杨美红
- 178 粘虫过氧化氢酶基因的克隆与表达分析  
李鸿波, 戴长庚, 张昌容, 何永福, 胡 阳
- 188 柞蚕 RR-1 亚族表皮蛋白基因 *ApCP12* 与 *ApCP23* 的表达特征与功能分析  
马月月, 刘 微, 王 勇, 王德意, 雷 飘, 汝玉涛, 姜义仁, 杨瑞生, 秦 利
- 263 葱蝇非滞育、夏滞育和冬滞育蛹体内抗氧化酶活性的比较分析(英文)  
郝友进, 郭 强, 陈 斌
- 271 沙葱萤叶甲海藻糖酶基因 *GdTrel* 的克隆、分子特性和表达分析  
陈 龙, 谭 瑶, 周晓榕, 庞保平, 格希格都仁, 孙志鹏
- 282 松墨天牛 *Mfe2* 基因的克隆、原核表达和表达谱分析  
柳小龙, 张 宾, 田浩楷, 宁 静, 王海香, 赵莉茵
- 292 中华蜜蜂气味受体基因 *AcOr10* 的克隆及表达分析  
杨 乐, 江武军, 何旭江, 曾志将
- 300 幼虫信息素酯类混合物对中华蜜蜂育王质量的影响  
胡景华, 张丽珍, 廖春华, 江武军, 曾志将, 颜伟玉
- 308 优雅蝟螽精子形成期间微丝和微管蛋白的动态变化  
陈 杰, 王 乐, 常岩林
- 391 家蚕滞育关联山梨醇脱氢酶基因的启动子活性分析  
朱 娟, 谢雨辰, 陈艳荣, 唐顺明, 易咏竹, 沈兴家
- 398 梨小食心虫谷胱甘肽 S-转移酶 *GmolGST6* 的基因克隆、原核表达和酶学特征  
李 帅, 苏 丽, 李伯辽, 李怡萍, 李广伟, 仵均祥
- 410 草地贪夜蛾组织蛋白酶 L 的基因克隆、原核表达及多克隆抗体制备  
程杏安, 林贤伟, 蒋旭红, 刘展眉, 钟国华, 胡美英

423 中华蜜蜂转录因子 AP-1 基因的克隆及特性分析  
郝学鹏, 魏 伟, 张卫星, 王红芳, 胥保华

432 小金蝠蛾幼虫血细胞的种类、形态及细胞免疫功能  
倪若尧, 孟 茜, 张 寰, 张继红, 秦启联

439 应用 3D 打印技术辅助识别昆虫脑解剖结构  
陈秋燕, 常亚军, 郭倩倩, 苏冉冉, 王 博, 贺 静, 谢桂英, 赵新成

519 褐飞虱 ATP 合酶 b 亚基基因 *ATPSb* 的克隆与功能分析  
冯娅琳, 郝培应, 俞飞飞, 陆潮峰, 朱家骏, 俞晓平

527 荔枝蒂蛀虫信息素结合蛋白基因序列及表达分析  
李鹏燕, 刘艳萍, 王思威, 孙海滨, 柏建山, 彭 刚, 龚雪海

537 柑橘大实蝇气味结合蛋白基因 *BminOBP25* 的克隆、原核表达及组织表达分析  
司品法, 周 琼, 崔中盟

546 中华蜜蜂半乳糖凝集素 AcGalectin 的表达、纯化及性质分析  
岳金金, 马宇驰, 刘 全, 姜莉莉, 费东亮, 张 鹤, 孙 莉, 李 明, 马鸣潇

627 家蚕油蚕 *oc* 突变体突变基因的精细定位  
殷娅茹, 胡 建, 胡文波, 杨成飞, 王 坤, 刘 春, 林 英, 朱 勇, 王凌燕

637 马铃薯甲虫 *N*- $\beta$ -丙酰多巴胺水解酶基因的克隆及功能分析  
杜晓燕, 付开赞, 徐晴玉, 吐尔逊·阿合买提, 丁新华, 何 江, 郭文超

646 沙葱萤叶甲化学感受蛋白基因的鉴定及表达谱分析(英文)  
李 玲, 周渊涛, 谭 瑶, 周晓榕, 庞保平

657 斜纹夜蛾信息素结合蛋白 *SltIPBP4* 的分子克隆、组织表达谱及结合特性分析  
孙佳斌, 刘乃勇, 李双美, 闫 祺, 董双林

668 羟色胺在粘虫视叶中的分布  
郭 培, 马百伟, 赵新成, 王高平, 谢桂英

749 松墨天牛小热激蛋白基因的克隆、表达谱及对温度胁迫的响应  
李 慧, 何玄玉, 陶 蓉, 陈宏建, 龚馨明, 李寿银, 郝德君

761 沙葱萤叶甲丝氨酸蛋白酶基因 *GdSP* 的克隆及对温度胁迫的响应  
单艳敏, 张 玉, 霍志家, 庞保平, 孙学涛

771 梨小食心虫 *Minus-C* 气味结合蛋白的分子克隆、表达谱及结合特性分析  
陈秀琳, 苏 丽, 陈丽慧, 李怡萍, 仵均祥, 李广伟

784 柞蚕蛹滞育和滞育解除过程中海藻糖酶基因表达模式及酶活力分析  
王德意, 汝玉涛, 王 勇, 马月月, 那 爽, 孙良振, 姜义仁, 秦 利

795 草地贪夜蛾 *S9* 细胞中 *snoRNA Bm-15* 反义寡核苷酸的定位及其对 *Bm-15* 的干涉效率  
李新梅, 邱妩洁, 崔 斌, 杨宗霖, 申雅文, 路一平, 阚云超, 李丹丹

801 棉铃虫可溶型海藻糖酶的化学修饰  
艾 东, 林荣华, 王 猛, 梁晓贺, 于彩虹

808 沙葱萤叶甲成虫越夏期间糖类、蛋白及脂肪含量的变化  
陈 龙, 周晓榕, 高利军, 谭 瑶, 庞保平

815 基于 RNA-seq 数据的窄足真蚋 SSR 分子标记开发  
郭 欢, 王 刚, 张树田, 黄 敏

825 梧桐木虱各龄若虫蜡腺和蜡分泌物超微结构观察  
李嘉乐, 任利利, 骆有庆

885 Ras 信号通路通过激活转录因子 *Myc* 促进核内复制细胞生长  
张祥乐, 马 俐, 马 倩, 李 胜, 刘素宁

895 饥饿胁迫对家蚕糖脂代谢的影响及 *BmFoxO* 的作用  
孟 竹, 文茂羽, 康晓丽, 卢忠燕, 赵 萍, 夏庆友

905 亮斑扁角水虻脂肪酸去饱和酶基因的鉴定及其在双翅目中的进化格局  
刘贵芬, 房刚奇, 詹 帅, 黄勇平

914 二化螟碱性神经酰胺酶和中性鞘磷脂酶基因 RNA 干扰技术体系的优化  
孙 娜, 杨 琼, 韩阳春, 张 茹, 王利华, 方继朝

1003 温度胁迫对点蜂缘蝽成虫呼吸代谢关键酶活性的影响  
陈菊红, 崔 娟, 张金平, 毕 锐, 高 宇, 徐 伟, 史树森

1010 柑橘大实蝇滞育和非滞育蛹体内海藻糖含量的调控  
王 佳, 樊 欢, 熊克才, 刘映红

1019 漆酶-1 基因在烟粉虱 MEAM1 隐种和温室粉虱中的表达模式比较  
杨春红, 郭建洋, 褚 栋, 程登发, 万方浩

1029 意大利蜜蜂铁蛋白基因 *AmFer3HCH* 的克隆及其在温度胁迫下的应答  
马荣琴, 王林玲, 衡 惠, 周泽扬, 李 治

1121 悬铃木方翅网蝽触角气味结合蛋白基因鉴定  
杨海博, 胡镇杰, 李定旭, 朱品红, 董钧锋

1132 家蚕 C 类清道夫受体 BmSR-C 的基因克隆、原核表达及亚细胞定位  
申 利, 许 川, 张 蕾, 张 奎, 毛景欣, 潘光照, 李重阳, 胡仁建, 杨丽群, 崔红娟

1145 家蚕 miR-301 对化学感受蛋白基因 *csp9* 表达的调控  
杨娟娟, 王远卓, 魏博帆, 邢秋婷, 阚云超, 乔惠丽

1153 意大利蜜蜂 N-乙酰- $\beta$ -D-氨基葡萄糖苷酶的分离纯化及性质分析(英文)  
张伟妮, 胡崇伟, 张梦馨, 韩威超, 黄小红

1247 组蛋白 H3Thr3 磷酸化在 Sf9 细胞有丝分裂中的动态定位  
张 冰, 徐 茜, 唐存多, 王姣玲, 吴盼盼, 朱露露, 阚云超

1253 麦红吸浆虫热激蛋白基因 *SmHsp40* 的克隆及其在滞育进程中和极端温度胁迫下的表达  
赵佳佳, 李雪娇, 刘珍珠, 成卫宁, 朱克岩

1263 棉铃虫离子型受体基因 *HarmIR8a* 的克隆及表达定位  
张夏瑄, 郭孟博, 刘一鹏, 王 冰, 王桂荣

1272 梨小食心虫幼虫中肠转录组及 SSR 分子标记分析  
冷春蒙, 李 引, 胡 迪, 仵均祥, 李怡萍

1284 大灰象甲实时定量 PCR 内参基因的筛选  
李 晓, 李建文, 成 波, 李 伟, 孙文秀, 高华援, 鞠 倩, 姜晓静, 杜 龙, 曲春娟, 曲明静

1363 意大利蜜蜂工蜂中肠的环状 RNA 及其调控网络分析  
熊翠玲, 陈华枝, 陈大福, 郑燕珍, 付中民, 徐国钧, 杜 宇, 王海朋, 耿四海, 周丁丁, 刘思亚, 郭 睿

1376 小菜蛾 NanosO 基因启动子的克隆及功能验证  
王亚军, 黄宇萍, 于慧慧, 徐雪娇, 杨 广, 艾倩倩, 尤民生

1384 叉头转录因子 1 基因 *FOXO1* 的特征及其在葱蝇夏滞育前期蛹体内糖脂代谢中的作用(英文)  
徐燕玲, 彭竹清, 司凤玲, 郝友进

1393 棉铃虫生物钟基因 *HeDbt* 的克隆和表达模式分析  
闫 硕, 刘彦君, 张馨方, 朱家林, 李 贞, 刘孝明, 张青文, 刘小侠

◆ 病理与微生物

11 白纹伊蚊抗溴氰菊酯品系的筛选及其对登革病毒的易感性  
贾志荣, 刘转转, 王晓明, Tricia WILLIAMS, 刘培文, 李小聪, 闫桂云, 陈晓光

25 肽聚糖识别蛋白 AaPGRP-LC 参与埃及伊蚊的抗细菌免疫反应  
杨青泰, 赵莉茜, 邹 振, 王燕红, 马瑞燕

200 基于 16S rRNA 高通量测序的灰飞虱体内细菌群落结构及多样性分析  
杨晓晴, 王正亮, 王天召, 俞晓平

322 华美奥锹甲不同顎型雄性成虫肠道细菌群落多样性  
蒋 宇, 孙丙华, 曹玉言, 翟勇宁, 万 霞

449 感染和未感染南方水稻黑条矮缩病毒的白背飞虱成虫唾液腺转录组比较分析  
邓 瑶, 刘玉娣, 王香萍, 侯茂林

555 新疆地区亚洲玉米螟中 *Wolbachia* 共生菌的检测和鉴定  
李 菁, 汪洋洲, 张小飞, 刘 津, 白明皓, 王振营

676 类肠膜魏斯氏菌通过调节蜕皮激素和胰岛素通路促进黑腹果蝇生长发育(英文)  
李恩惠, 王晓阳, 张乐宵, 白 芃, 赵 欣, 刘 威, 张 策

686 日本弓背蚁颊下囊微生物的组成及多样性  
张凯旋, 魏 琮, 南小宁, 王云果, 贺 虹

835 阿南原等跳肠道细菌的分离鉴定及降解纤维素细菌的筛选  
王立秀, 陈 伟, 谢桂林, 周 亮

843 美棘蓟马体内 *Wolbachia* 感染的时空分布  
张晓晨, 冯纪年

923 球孢白僵菌侵染的柞蚕蛹体壁和脂肪体组织病理观察  
申 宇, 安利佳, 李文利

932 崇明拟异小杆线虫 *daf-16* 基因的功能鉴定  
詹成修, 熊阳杰, 张 涛, 张克云

1160 云南家蚕核型多角体病毒分离株的毒力测定及系统进化分析  
唐芬芬, 张永红, 邵榆岚, 朱 峰, 白兴荣

❖ 毒理与抗性

18 我国白纹伊蚊对三种拟除虫菊酯类杀虫剂抗性检测诊断剂量的建立  
高景鹏, 陈翰明, 马雅军

86 三十六种植物精油对淡色库蚊的熏蒸活性评价  
陈 伟, 吴 华, 马志卿, 冯俊涛, 张 兴

94 基于对淡色库蚊生物活性的植物源蚊香增效剂的筛选  
张 洁, 刘 辉, 杨晓伟, 张 兴

209 海南烟粉虱田间种群隐种鉴定及对溴氰虫酰胺和氟吡呋喃酮的敏感性检测  
郭 磊, 黄新意, 梁延坡, 刘想想, 褚 栋

218 氟胺氰菊酯对西方蜜蜂育王质量的影响  
廖春华, 张 波, 史晶亮, 吴小波

331 百里香、欧芹和熏衣草水苏提取物对四纹豆象成虫的生物活性(英文)  
Fahimeh HAMIDI, Ali MEHRVAR, Naser EIVAZIAN KARY, Hassan VALIZADEH

565 灰茶尺蠖对三种非寄主植物精油的触角电位和行为反应  
张方梅, 乔 利, 潘鹏亮, 王国君, 尹 健, 陈利军

698 姜黄根提取物对苜蓿蚜成蚜有杀虫活性化合物的分离与鉴定  
张 敏, 刘 佳, 傅伟杰, 代光辉

851 昆虫病原线虫和噻虫嗪混用对韭蛆的杀虫效果及其体内保护酶和解毒酶活性的影响  
武海斌, 宫庆涛, 陈珍珍, 姜莉莉, 公 义, 许永玉, 孙瑞红

941 126 种植物精油或精油主要成分对玉米黄呆蓟马的熏杀活性筛选  
芦小鹏, 吴 琼, 李毛龙, 李三兴, 马志卿, 张 兴

950 六种新烟碱类杀虫剂对凹唇壁蜂的毒性及风险评估  
袁 锐, 李丽莉, 李 超, 夏小菊, 郑 礼, 于 毅, 门兴元

1404 臭氧水对韭蛆的防治效果及对韭菜生长的影响  
胡静荣, 史彩华, 徐宝云, 魏启文, 谢 文, 李传仁, 张友军

❖ 生态与害虫治理

224 亚洲玉米螟雌蛾产卵偏好寄主植物的筛选及对萆草挥发性化学成分的电生理反应  
张文璐, 王文强, 白树雄, 张天涛, 何康来, 王振营

232 不同寄主植物对美国白蛾幼虫取食行为及解毒酶活性的影响  
李路莎, 袁郁斐, 武 磊, 陈 敏

240 异色瓢虫非同胞间食卵自相残杀对成虫生殖力的影响  
沈新兰, 沙宪兰, 舒晓晗, 李保平, 孟 玲

340 亚洲玉米螟的一个生活史特征——体重与温度呈正相关  
何海敏, 肖 亮, 陈前武, 薛芳森

348 欧洲地熊蜂对我国本土熊蜂的生殖干扰评估  
袁晓龙, Muhammad NAEEM, 张 红, 梁 铖, 黄家兴, 安建东

458 柑橘大实蝇成虫在中国板栗雄花花序上的取食行为  
何章章, 华登科, 杜田华, 王福莲, 桂连友

468 区域农田景观格局对麦田天敌瓢虫群落的影响  
张永生, 欧阳芳, 门兴元, 戈 峰, 袁哲明

574 不同危害状态下寄主山核桃挥发物成分的比较及桑天牛对其组分的 GC-EAD 和行为反应  
马 艳, 史黎央, 赵 艺, 徐华潮

585 华北大黑鳃金龟成虫对三种植物的取食选择及趋性行为反应  
热孜宛古丽·阿卜杜克热木, 曹雅忠, 张 帅, 尹 姣, 李 雪, 李克斌

596 基于极端顶点混料设计优化黄粉虫秸秆饲料配方  
李小龙, 熊晓莉, 李 宁

604 管氏肿腿蜂的交配行为  
罗丽林, 李 莉

704 捕食性瓢虫的体型大小影响其偏好捕食防御性强的猎物吗? (英文)  
Priya PATEL, Bhupendra KUMAR, Dinesh KUMAR

860 害虫取食和机械损伤对菜豆不同部位叶片防御酶活性的影响  
岳文波, 郅军锐, 刘 利, 叶 茂, 张向前, 曾 广

871 石蒜绵粉蚧生物学特性  
智伏英, 黄 芳, 黄 俊, 酆卫弟, 吕要斌

957 迁飞性害虫褐飞虱对地磁强度变化的种群适合度响应  
刘瑞莹, 肖子衿, 贺静澜, 万贵钧, 潘卫东, 陈法军

968 CO<sub>2</sub> 浓度升高对红色型豌豆蚜生物学特性的影响  
孙 倩, 张廷伟, 吕雨晴, 魏君玉, 李静静, 刘长仲

976 牧草盲蝽危害对寄主植物体内营养物质含量及保护酶活性的影响  
苟长青, 孙 鹏, 刘端春, 迪丽努尔·艾麦提, 冯宏祖

984 二点委夜蛾适应性与玉米苗营养物质和次生代谢物质含量的关系  
郭婷婷, 门兴元, 于 毅, 郭文秀, 张思聪, 孙廷林, 李丽莉

1040 布拉迪小环腹瘦蜂的生物学特性及其寄生对黑腹果蝇生长发育的影响  
周思聪, 陈佳妮, 庞 兰, 潘中秋, 时 敏, 黄健华, 陈学新

1047 寄主植物对双尾新小绥螨运动速率及捕食能力的影响  
张燕南, 顾佳敏, 陈 静, 王佩玲, 张建萍

1170 温度对石蒜绵粉蚧生长发育和繁殖的影响  
李思怡, 王吉锐, 赖秋利, 张胜娟, 邵炜冬, 徐志宏

1177 麦长管蚜有翅成蚜母代饥饿对其后代发育和繁殖的影响  
吕楠楠, 石 棋, 仵均祥, 许向利

1184 玉米桃蛀螟雌蛾性信息素的微量组分鉴定及其性信息素诱芯组分的配比优化  
徐 翔, 孔德生, 冯 波, 钱 凯, 杜永均

1295 光周期和 LED 光源对茄二十八星瓢虫成虫行为的影响  
方 梅, 谢建坤, 朱 敏, 王 敏, 涂小云

1300 灰茶尺蠖对不同茶树品种取食选择与适应性及与茶树叶片营养成分的关系  
葛超美, 张家侠, 孙钦玉, 叶 涛, 夏先江, 张 冉, 丁 勇

1310 野外条件下松墨天牛诱芯中引诱剂成分变化及其对诱捕效果的影响  
胡 琴, 金 京, 杜永斌, 樊建庭

1414 脂肪酸对红火蚁搬尸行为的影响  
徐艳勤, 陈 立, 王文凯

1421 樟叶蜂两性生殖与孤雌生殖方式下雌虫生殖适合度及子代生活史特征的比较  
徐川峰, 石昊妮, 殷立新, 周嘉颖, 刘兴平

1430 紫胶林中蚂蚁-紫胶虫互利关系和寄主植物多样性对节肢动物各营养级的影响  
王 庆, 卢志兴, 赵婧文, 陈又清

1439 银川不同湿地陆生昆虫群落多样性与稳定性  
何云川, 杨贵军, 王新谱

◆ 进化与系统学

103 中国库蚊属四十个种(亚种)的分子系统发育关系研究(双翅目:蚊科)  
孙 玲, 付文博, 闫振天, 陈 斌

114 骚扰阿蚊线粒体全基因组序列测定和分析  
李旭东, 陈 斌

246 透明疏广蜡蝉精子超微结构  
江 珍, 秦道正

255 基于全卷积网络的鳞翅目标本图像前背景自动分割方法研究  
竺乐庆, 马梦园, 张 真, 孟昭军, 吴 伟, 任利利, 高翠青, 南小宁

477 黑毛皮蠹线粒体基因组分析及皮蠹科系统发育分析  
林爱丽, 李欣欣, 赵新成, 宋 南

488 基于线粒体 COI 基因的青海省 44 种蚤类的分子鉴定及系统发育分析  
马 英, 李海龙, 何 建, 赵延梅, 杨汉青, 鲁 亮, 刘起勇

498 荒川库蠨雌雄成虫形态和超微结构  
蒋晓红, 常琼琼, 侯晓晖

613 基于微卫星分子标记的中国瓜实蝇不同地理种群遗传分化分析  
张亚楠, 牛黎明, 周世豪, 龔 治, 李 磊, 张方平, 韩冬银, 符悦冠

712 我国粘虫种群的微卫星位点筛选及遗传多样性分析  
李梅梅, 李伯辽, 仵均祥, 许向利

877 大豆蚜虫龄鉴别特征  
李 慧, 刘小侠, 智海剑, 李 凯, 张青文, 李 贞

991 四种蝉科昆虫的精子形态(半翅目:蝉科)  
崔贝贝, 魏 琮

1054 中国东北地区亚洲玉米螟遗传多样性及寄主专化性分析  
王克勤, 刘兴龙, 邵天玉

1067 中国细蛾科寄主植物多样性分析  
白海艳, 铁 军, 侯沁文

1192 黑斑双叉叶蝉成虫触角及触角感器的扫描电镜观察  
郭付振, 袁水霞, 王荷然, 郭可建

1202 我国五种重要吉丁虫学名订正及再描述(鞘翅目:吉丁甲科)  
王小艺, 曹亮明, 杨忠岐

1319 中国丝光绿蝇种群线粒体细胞色素 b 基因的遗传多样性分析及其对法医学上死亡地点推断的意义  
刘钦来, 修世鹏, 吕 品, 唐光峰, 张 杰, 王晓军, 赵英健, 孙文平

1453 基于 CO I 基因序列的蜜蜂属系统发育分析及其舞蹈和筑巢行为进化分析  
任晓晓, 贺兴江, 龔雪阳, 赵文正, 刘意秋, 董 坤

1462 沂蒙山地区中华蜜蜂种群遗传多样性分析(英文)  
郝学鹏, 张卫星, 魏 伟, 陈文凤, 李振芳, 夏振宇, 于 静, 刘家昕, 马兰婷, 刘振国, 王红芳, 胥保华

综 述

1 媒介生物学与媒介昆虫  
邹 振, 康 乐

122 蚊科昆虫分类及区系研究历史和现状概述  
付文博, 陈 斌

360 昆虫启动子的研究及应用  
童晓玲, 石 津, 盖亭亭, 方春燕, 代方银

371 家蚕基因组靶向编辑技术研究进展  
龙定沛, 郝占章, 向仲怀, 赵爱春

385 昆虫精氨酸激酶研究进展  
郑雅楠, 刘佩旋, 时 勇, 范立淳

620 熊蜂营养与饲料研究进展  
王 欢, 徐希莲

721 荔枝蒂蛀虫研究进展  
李文景, 董易之, 姚 琼, 陈炳旭

1076 悬铃木方翅网蝽生物学、化学生态学及防治研究进展  
李峰奇, 付宁宁, 张连忠, 焦蒙蒙, 彭凌飞, 许奕华, 罗 晨

1087 夜行性传粉蛾类研究进展  
杨晓飞, 朱 琳, 李后魂

1212 抑制剂胱氨酸结多肽的抗菌和杀虫活性及进化  
赵静茹, 袁守丽, 高 斌, 朱顺义

1222 小蠹虫类异戊二烯类聚集信息素的生物合成  
方加兴, 张苏芳, 刘 福, 张 真, 孔祥波

1328 20-羟基蜕皮酮调控昆虫先天免疫的分子机制研究进展  
王 远, 张若男, 陈 雪, 顾偲铤, 苏 睿, 钟仰进, 杨婉莹

1340 家蚕中调控胚胎滞育的滞育激素及其受体研究概况  
沈张飞, 解鸿青, 时连根

1350 蜜蜂哺育蜂与采集蜂行为转变调控因子研究进展  
刘 芳, 施腾飞, 齐 磊

1472 昆虫基质金属蛋白酶研究进展  
陈康康, 张一强, 朱前明, 唐 泰, 王迎娟, 冯从经

1481 CRISPR 系统用于昆虫基因表达调控的研究进展与展望  
刘素宁, 李 胜, 任充华

1488 昆虫体外共生菌研究进展  
林勇文, 侯有明

简 报

139 中华按蚊气味结合蛋白 AsinOBP1 与避蚊胺( DEET) 的结合特性分析  
史宗畔, 冉永红, 张晶晶, 张 静, 闫振天, 陈 斌, 何正波

505 一株分离自土壤的蜡蚧菌的鉴定及对烟草粉斑螟的致病性  
周叶鸣, 邱军锐, 张 鑫, 邹 晓, 杨 凯

511 不同光周期对高粱蚜种群参数的影响  
武德功, 詹秋文, 黄保宏, 王增霞, 黄伟东, 毕亚玲, 刘长仲, 杜军利

733 基于改良石蜡切片技术的飞蝗胚胎浆膜表皮发育模式及形态变化观察  
柳伟伟, 李任建, 付穗业, 董 卿, 张 敏, 张学尧, 张建珍, 张婷婷

741 浙江茶区茶尺蠖两近缘种的遗传分化及分布  
白家赫, 王志博, 肖 强

1097 悬铃木方翅网蝽飞行能力测试及远距离扩散轨迹分析  
卢绍辉, 魏美才, 袁国军, 崔建新, 梅象信

1106 新疆阿勒泰地区草地螟成虫发生特征  
阿孜古丽·阿布力孜, 牙森·沙力, 族米娜, 阿曼古力·吐尼亚孜, 吴乐年, 徐光青, 赵 莉

1114 河北行唐地区玉米害虫灰地种蝇的鉴定及其对玉米种子和幼苗的为害  
张海剑, 宋 健, 马红霞, 石 洁, 胡清玉, 王振营

1237 南亚实蝇鞣化激素基因的克隆与表达分析  
张贺贺, 张琪文, 林 嘉, 季清娥, 陈家骅

1356 一种白背飞虱橙眼突变体( 英文)  
葛家桢, 楼玉婷, 张传溪

RESEARCH PAPERS

❖ **Physiology and Biochemistry**

36 Genome-wide identification, characterization and evolutionary analysis of genes of the heme peroxidase family in *Anopheles sinensis* (Diptera: Culicidae)  
YIN Hua-Chun, ZHANG Li-Juan, CHEN Bin

48 Heterologous expression, purification and crystallization of  $\alpha$ -carboxylesterase AsAe7 from *Anopheles sinensis* (Diptera: Culicidae)  
ZHANG Tian-Tian, MIAO Ya, XU Bo-Ying, CHEN Bin

59 Expression, purification and crystallization of the glutathione-S-transferase E6 (AsGSTE6) from *Anopheles sinensis* (Diptera: Culicidae)  
MIAO Ya, ZHANG Tian-Tian, XU Bo-Ying, CHEN Bin

68 Virtual screening of inhibitors for kynurenine formamidase of *Anopheles gambiae* (Diptera: Culicidae)  
SONG Shuai-Bao, AI Shang-Jie, GUAN Huai, HAN Qian

79 Establishment and identification of a new cell line from *Culex pipiens quinquefasciatus* (Diptera: Culicidae)  
LUO Lan, CUI Feng

149 Effects of ectopic expression of *Dichaete* on leg development of *Drosophila* and its underlying mechanism  
DONG Wei, KONG Yue, MA En-Bo, ZHANG Jian-Zhen, ZHANG Min, ZHANG Xu-Bo

156 Differences in transcriptome and the expression of wing type related genes in nymphs and winged and apterous adults of *Myzus persicae* (Hemiptera: Aphididae)  
ZHANG Chao, YANG Hong, YANG Mao-Fa, YU Hui-Ping, DAI Yuan-Feng

168 Analysis of the antennal transcriptome and olfaction-related genes of *Callosobruchus chinensis* (Coleoptera: Bruchidae)  
ZHENG Hai-Xia, ZHANG Yao-Wen, ZHANG Xian-Hong, YANG Mei-Hong

178 Cloning and expression profiling of catalase gene in the oriental armyworm, *Mythimna separata* (Lepidoptera: Noctuidae)  
LI Hong-Bo, DAI Chang-Geng, ZHANG Chang-Rong, HE Yong-Fu, HU Yang

188 Expression profiling and functional analysis of RR-1 cuticular protein genes *ApCP12* and *ApCP23* in *Antheraea pernyi* (Lepidoptera: Saturniidae)  
MA Yue-Yue, LIU Wei, WANG Yong, WANG De-Yi, LEI Piao, RU Yu-Tao, JIANG Yi-Ren, YANG Rui-Sheng, QIN Li

263 Comparative analysis of antioxidant enzyme activities in non-diapause, summer diapause and winter diapause pupae of *Delia antiqua* (Diptera: Anthomyiidae) (In English)  
HAO You-Jin, GUO Qiang, CHEN Bin

271 Molecular cloning, characterization and expression analysis of trehalase gene *GdTre1* in *Galeruca daurica* (Coleoptera: Chrysomelidae)  
CHEN Long, TAN Yao, ZHOU Xiao-Rong, PANG Bao-Ping, GEXIGEDUREN, SUN Zhi-Peng

282 Cloning, prokaryotic expression and expression profiling of *Mfe2* from the Japanese sawyer beetle, *Monochamus alternatus* (Coleoptera: Cerambycidae)  
LIU Xiao-Long, ZHANG Bin, TIAN Hao-Kai, NING Jing, WANG Hai-Xiang, ZHAO Li-Lin

292 Cloning and expression analysis of olfactory receptors gene *AcOr10* in the Chinese honeybee, *Apis cerana cerana* (Hymenoptera: Apidae)  
YANG Le, JIANG Wu-Jun, HE Xu-Jiang, ZENG Zhi-Jiang



- 300 Effects of mixtures of brood pheromone esters on the reared queen quality of the Chinese honeybee, *Apis cerana cerana* (Hymenoptera: Apidae)  
HU Jing-Hua, ZHANG Li-Zhen, LIAO Chun-Hua, JIANG Wu-Jun, ZENG Zhi-Jiang, YAN Wei-Yu
- 308 Dynamics of microfilaments and tubulin during spermiogenesis in the Chinese bush cricket, *Gampsocleis gratiosa* (Orthoptera: Tettigoniidae)  
CHEN Jie, WANG Le, CHANG Yan-Lin
- 391 Determination of the promoter activity of diapause-associated sorbitol dehydrogenase genes in the silkworm, *Bombyx mori*  
ZHU Juan, XIE Yu-Chen, CHEN Yan-Rong, TANG Shun-Ming, YI Yong-Zhu, SHEN Xing-Jia
- 398 cDNA cloning, prokaryotic expression and enzymatic characteristics of the glutathione S-transferase GmoGST6 in *Grapholita molesta* (Lepidoptera: Tortricidae)  
LI Shuai, SU Li, LI Bo-Liao, LI Yi-Ping, LI Guang-Wei, WU Jun-Xiang
- 410 cDNA cloning, prokaryotic expression and polyclonal antibody preparation of cathepsin L in *Spodoptera frugiperda* (Lepidoptera: Noctuidae)  
CHENG Xing-An, LIN Xian-Wei, JIANG Xu-Hong, LIU Zhan-Mei, ZHONG Guo-Hua, HU Mei-Ying
- 423 Molecular cloning and characterization of transcription factor AP-1 gene in *Apis cerana cerana* (Hymenoptera: Apidae)  
CHI Xue-Peng, WEI Wei, ZHANG Wei-Xing, WANG Hong-Fang, XU Bao-Hua
- 432 Types, morphology and cellular immune functions of hemocytes in larvae of *Thitarodes xiaojinensis* (Lepidoptera: Hepialidae)  
NI Ruo-Yao, MENG Qian, ZHANG Huan, ZHANG Ji-Hong, QIN Qi-Lian
- 439 Identification of insect brain neuropils aided with the application of 3D printer technology  
CHEN Qiu-Yan, CHANG Ya-Jun, GUO Qian-Qian, SU Ran-Ran, WANG Bo, HE Jing, XIE Gui-Ying, ZHAO Xin-Cheng
- 519 Molecular cloning and function analysis of ATP synthase b subunit gene *ATPSb* in the brown planthopper, *Nilaparvata lugens* (Hemiptera: Delphacidae)  
FENG Ya-Lin, HAO Pei-Ying, YU Fei-Fei, LU Chao-Feng, ZHU Jia-Jun, YU Xiao-Ping
- 527 Sequence analysis and expression profiling of pheromone binding protein genes in the litchi fruit borer, *Conopomorpha sinensi* (Lepidoptera: Gracillariidae)  
LI Peng-Yan, LIU Yan-Ping, WANG Si-Wei, SUN Hai-Bin, BAI Jian-Shan, PENG Gang, GONG Xue-Hai
- 537 Cloning, prokaryotic expression and tissue expression profiling of an odorant binding protein gene *BminOBP25* from *Bactrocera minax* (Diptera: Tephritidae)  
SI Pin-Fa, ZHOU Qiong, CUI Zhong-Yi
- 546 Expression, purification and characterization of galectin AcGalectin in *Apis cerana cerana* (Hymenoptera: Apidae)  
YUE Jin-Jin, MA Yu-Chi, LIU Quan, JIANG Li-Li, FEI Dong-Liang, ZHANG He, SUN Li, LI Ming, MA Ming-Xiao
- 627 Fine mapping of mutant gene in the chinese translucent (*oc*) mutant of the silkworm, *Bombyx mori*  
YIN Ya-Ru, HU Jian, HU Wen-Bo, YANG Cheng-Fei, WANG Kun, LIU Chun, LIN Ying, ZHU Yong, WANG Ling-Yan
- 637 Molecular cloning and functional characterization of *N*- $\beta$ -alanyl-dopamine hydroxylase gene in the Colorado potato beetle, *Leptinotarsa decemlineata* (Coleoptera: Chrysomelidae)  
DU Xiao-Yan, FU Kai-Bin, XU Qing-Yu, Tursun AHMT, DING Xin-Hua, HE Jiang, GUO Wen-Chao
- 646 Identification and expression profiling of chemosensory protein genes in *Galeruca daurica* (Coleoptera: Chrysomelidae) (*In English*)  
LI Ling, ZHOU Yuan-Tao, TAN Yao, ZHOU Xiao-Rong, PANG Bao-Ping
- 657 Molecular cloning, tissue expression profiling and binding characterization of the pheromone binding protein SlitPBP4 from *Spodoptera litura* (Lepidoptera: Noctuidae)  
SUN Jia-Bin, LIU Nai-Yong, LI Shuang-Mei, YAN Qi, DONG Shuang-Lin

- 668 Distribution of 5-hydroxytryptamine in the optic lobes of the oriental armyworm, *Mythimna separata* (Lepidoptera: Noctuidae)  
GUO Pei, MA Bai-Wei, ZHAO Xin-Cheng, WANG Gao-Ping, XIE Gui-Ying
- 749 cDNA cloning and expression profiling of small heat shock protein genes and their response to temperature stress in *Monochamus alternatus* (Coleoptera: Cerambycidae)  
LI Hui, HE Xuan-Yu, TAO Rong, CHEN Hong-Jian, GONG Xin-Yue, LI Shou-Yin, HAO De-Jun
- 761 Molecular cloning of a serine protease gene *DdSP* and its response to temperature stress in *Galeruca daurica* (Coleoptera: Chrysomelidae)  
SHAN Yan-Min, ZHANG Yu, HUO Zhi-Jia, PANG Bao-Ping, SUN Xue-Tao
- 771 Molecular cloning, expression profiling and binding characterization of a Minus-C odorant binding protein from the oriental fruit moth, *Grapholita molesta* (Lepidoptera: Tortricidae)  
CHEN Xiu-Lin, SU Li, CHEN Li-Hui, LI Yi-Ping, WU Jun-Xiang, LI Guang-Wei
- 784 Gene expression patterns and activities of trehalases in *Antheraea pernyi* (Lepidoptera: Saturniidae) pupae during diapause and diapause termination  
WANG De-Yi, RU Yu-Tao, WANG Yong, MA Yue-Yue, NA Shuang, SUN Liang-Zhen, JIANG Yi-Ren, QIN Li
- 795 Cellular location of antisense oligonucleotide of snoRNA Bm-15 and its interference efficiency with Bm-15 in *Spodoptera frugiperda* Sf9 cells  
LI Xin-Mei, QIU Wu-Jie, CUI Bin, YANG Zong-Lin, SHEN Ya-Wen, LU Yi-Ping, HAN Yun-Chao, LI Dan-Dan
- 801 Chemical modification of soluble trehalase from *Helicoverpa armigera* (Lepidoptera: Noctuidae)  
AI Dong, LIN Rong-Hua, WANG Meng, LIANG Xiao-He, YU Cai-Hong
- 808 Change of carbohydrate, protein and lipid contents in *Galeruca daurica* (Coleoptera: Chrysomelidae) adults during overwintering  
CHEN Long, ZHOU Xiao-Rong, GAO Li-Jun, TAN Yao, PANG Bao-Ping
- 815 Development of SSR primers for *Simulium* (*Eusimulium*) *angustipes* (Diptera: Simuliidae) based on RNA-seq dataset  
GUO Huan, WANG Gang, ZHANG Shu-Tian, HUANG Min
- 825 Ultrastructure of waxy glands and waxy secretions in nymphs of *Carsidara limbata* (Hemiptera: Carsidarinae)  
LI Jia-Le, REN Li-Li, LUO You-Qing
- 885 Ras signaling pathway promotes the growth of endoreplication cells through activating the expression of transcription factor *Myc*  
ZHANG Xiang-Le, MA Li, MA Qian, LI Sheng, LIU Su-Ning
- 895 Effects of starvation stress on the glucose and lipid metabolism and the role of BmFoxO in *Bombyx mori*  
MENG Zhu, WEN Mao-Yu, KANG Xiao-Li, LU Zhong-Yan, ZHAO Ping, XIA Qing-You
- 905 Identification of fatty acid desaturase genes in *Hemeta illucens* (Diptera: Stratiomyidae) and their evolutionary pattern in Diptera  
LIU Gui-Fen, FANG Gang-Qi, ZHAN Shuai, HUANG Yong-Ping
- 914 Optimization of the RNAi system of alkaline ceramidase and neutral sphingomyelinase genes in *Chilo suppressalis* (Lepidoptera: Pyralidae)  
SUN Na, YANG Qiong, HAN Yang-Chun, ZHANG Ru, WANG Li-Hua, FANG Ji-Chao
- 1003 Effects of temperature on the activities of key enzymes related to respiratory metabolism in *Riptortus pedestris* (Hemiptera: Coreidae) adults  
CHEN Ju-Hong, CUI Juan, ZHANG Jin-Ping, BI Rui, GAO Yu, XU Wei, SHI Shu-Sen
- 1010 Regulation of the trehalose content in diapausing and non-diapausing pupae of the Chinese citrus fly, *Bactrocera minax* (Diptera: Tephritidae)  
WANG Jia, FAN Huan, XIONG Ke-Cai, LIU Ying-Hong

- 1019 Comparison of expression patterns of laccase-1 gene in *Bemisia tabaci* MEAM1 and *Trialeurodes vaporariorum* (Hemiptera: Aleyrodidae)  
YANG Chun-Hong, GUO Jian-Yang, CHU Dong, CHENG Deng-Fa, WAN Fang-Hao
- 1029 Cloning of ferritin gene *AmFer3HCH* and its response to temperature stress in the Italian honeybee, *Apis mellifera ligustica* (Hymenoptera: Apidae)  
MA Rong-Qin, WANG Lin-Ling, HENG Hui, ZHOU Ze-Yang, LI Zhi
- 1121 Identification of odorant binding protein genes in antennae of *Corythucha ciliata* (Hemiptera: Tingidae)  
YANG Hai-Bo, HU Zhen-Jie, LI Ding-Xu, ZHU Pin-Hong, DONG Jun-Feng
- 1132 Gene cloning, prokaryotic expression and subcellular localization of a class C scavenger receptor BmSR-C in the silkworm, *Bombyx mori*  
SHEN Li, XU Chuan, ZHANG Lei, ZHANG Kui, MAO Jing-Xin, PAN Guang-Zhao, LI Zhong-Yang, HU Ren-Jian, YANG Li-Qun, CUI Hong-Juan
- 1145 Regulation of the expression of chemosensory protein gene *csp9* by miR-301 in *Bombyx mori*  
YANG Juan-Juan, WANG Yuan-Zhuo, WEI Bo-Fan, XING Qiu-Ting, HAN Yun-Chao, QIAO Hui-Li
- 1153 Purification and characterization of N-acetyl- $\beta$ -D-glucosaminidase from the Italian honey bee, *Apis mellifera ligustica* (Hymenoptera: Apidae) (In English)  
ZHANG Wei-Ni, HU Chong-Wei, ZHANG Meng-Xin, HAN Wei-Chao, HUANG Xiao-Hong
- 1247 Dynamic localization of histone H3 Thr3 phosphorylation in Sf9 cells during mitosis  
ZHANG Bing, XU Qian, TANG Cun-Duo, WANG Jiao-Ling, WU Pan-Pan, ZHU Lu-Lu, KAN Yun-Chao
- 1253 Cloning of heat shock protein gene *SmHsp40* and its expression during diapause and under extreme temperature stress in *Sitodiplosis mosellana* (Diptera: Cecidomyiidae)  
ZHAO Jia-Jia, LI Xue-Jiao, LIU Zhen-Zhu, CHENG Wei-Ning, ZHU Ke-Yan
- 1263 Cloning and expression localization of ionotropic receptor gene *HarmIR8a* in *Helicoverpa armigera* (Lepidoptera: Noctuidae)  
ZHANG Xia-Xuan, GUO Meng-Bo, LIU Yi-Peng, WANG Bing, WANG Gui-Rong
- 1272 Analysis of the larval midgut transcriptome and SSR markers in *Grapholitha molesta* (Lepidoptera: Tortricidae)  
LENG Chun-Meng, LI Yin, HU Di, WU Jun-Xiang, LI Yi-Ping
- 1284 Screening of reference genes for quantitative real-time PCR in *Sympiezomias velatus* (Coleoptera: Curculionidae)  
LI Xiao, LI Jian-Wen, CHENG Bo, LI Wei, SUN Wen-Xiu, GAO Hua-Yuan, JU Qian, JIANG Xiao-Jing, DU Long, QU Chun-Juan, QU Ming-Jing
- 1363 Analysis of circular RNAs and their regulatory networks in the midgut of *Apis mellifera ligustica* workers  
XIONG Cui-Ling, CHEN Hua-Zhi, CHEN Da-Fu, ZHENG Yan-Zhen, FU Zhong-Min, XU Guo-Jun, DU Yu, WANG Hai-Peng, GENG Si-Hai, ZHOU Ding-Ding, LIU Si-Ya, GUO Rui
- 1376 Cloning and functional characterization of the NanosO gene promoter in *Plutella xylostella* (Lepidoptera: Noctuidae)  
WANG Ya-Jun, HUANG Yu-Ping, YU Hui-Hui, XU Xue-Jiao, YANG Guang, AI Qian-Qian, YOU Min-Sheng
- 1384 Characterization of fork head transcription factor 1 gene *FOXO1* and its role in sugar and lipid metabolism in the summer prediapause pupae of *Delia antiqua* (Diptera: Anthomyiidae) (In English)  
XU Yan-Ling, PENG Zhu-Qing, SI Feng-Ling, HAO You-Jin
- 1393 Cloning and expression profiling of circadian clock gene *HeDbt* in *Helicoverpa armigera* (Lepidoptera: Noctuidae)  
YAN Shuo, LIU Yan-Jun, ZHANG Xin-Fang, ZHU Jia-Lin, LI Zhen, LIU Xiao-Ming, ZHANG Qing-Wen, LIU Xiao-Xia

## ❖ Pathology and Microbiology

- 11 Screening of the deltamethrin-resistant strain of *Aedes albopictus* (Diptera: Culicidae) and its susceptibility to dengue virus  
JIA Zhi-Rong, LIU Zhuan-Zhuan, WANG Xiao-Ming, Tricia WILLIAMS, LIU Pei-Wen, LI Xiao-Cong, YAN Gui-Yun, CHEN Xiao-Guang

- 25 Peptidoglycan recognition protein AaPGRP-LC is involved in immune responses against bacteria in *Aedes aegypti* (Diptera: Culicidae)  
YANG Qing-Tai, ZHAO Li-Lin, ZOU Zhen, WANG Yan-Hong, MA Rui-Yan
- 200 Analysis of the bacterial community structure and diversity in the small brown planthopper, *Laodelphax striatellus* (Hemiptera: Delphacidae) by 16S rRNA high-throughput sequencing  
YANG Xiao-Qing, WANG Zheng-Liang, WANG Tian-Zhao, YU Xiao-Ping
- 322 Diversity of gut bacterial communities in male adults of *Odontolabis fallaciosa* (Coleoptera: Scarabaeoidea: Lucanidae) with different mandibular forms  
JIANG Yu, SUN Bing-Hua, CAO Yu-Yan, DI Yong-Ning, WAN Xia
- 449 Comparative transcriptome analysis of salivary glands of *Southern rice black-streaked dwarf virus* (SRBSDV)-infected and uninfected adults of the white-backed planthopper, *Sogatella furcifera* (Hemiptera: Delphacidae)  
DENG Yao, LIU Yu-Di, WANG Xiang-Ping, HOU Mao-Lin
- 555 Detection and identification of *Wolbachia* in the Asian corn borer, *Ostrinia furnacalis* (Lepidoptera: Crambidae) in Xinjiang, northwestern China  
LI Jing, WANG Yang-Zhou, ZHANG Xiao-Fei, LIU Jin, BAI Ming-Hao, WANG Zhen-Ying
- 676 *Weissella paramesenteroides* facilitates the systemic growth of *Drosophila melanogaster* by modulating ecdysone and insulin signaling pathways (In English)  
LI En-Hui, WANG Xiao-Yang, ZHANG Le-Xiao, BAI Peng, ZHAO Xin, LIU Wei, ZHANG Ce
- 686 Composition and diversity of microbes in the infrabuccal pocket of *Camponotus japonicus* (Hymenoptera: Formicidae)  
ZHANG Kai-Xuan, WEI Cong, NAN Xiao-Ning, WANG Yun-Guo, HE Hong
- 835 Isolation and identification of intestinal bacteria and screening of cellulolytic bacteria in *Proisotoma ananevae* (Collembola: Isotomidae)  
WANG Li-Xiu, CHEN Wei, XIE Gui-Lin, ZHOU Liang
- 843 Temporal and spatial distribution of *Wolbachia* infection in the poinsettia thrips, *Echinothrips americanus* (Thysanoptera: Thripidae)  
ZHANG Xiao-Chen, FENG Ji-Nian
- 923 Histopathological observation of the integument and fat body of *Antheraea pernyi* (Lepidoptera: Saturniidae) pupae infected by *Beauveria bassiana*  
SHEN Yu, AN Li-Jia, LI Wen-Li
- 932 Functional identification of *daf-16* in *Heterorhabditoides chongmingensis* (Rhabditida: Rhabditidae)  
ZHAN Cheng-Xiu, XIONG Yang-Jie, ZHANG Tao, ZHANG Ke-Yun
- 1160 Virulence and phylogenetic analysis of *Bombyx mori* nucleopolyhedrovirus isolates from Yunnan, southwestern China  
TANG Fen-Fen, ZHANG Yong-Hong, SHAO Yu-Lan, ZHU Feng, BAI Xing-Rong
- ❖ **Toxicology and Resistance**
- 18 Establishment of diagnostic doses of three pyrethroid insecticides for detecting resistance in *Aedes albopictus* (Diptera: Culicidae) in China  
GAO Jing-Peng, CHEN Han-Ming, MA Ya-Jun
- 86 Evaluation of fumigation activity of thirty-six essential oils against *Culex pipiens pallens* (Diptera: Culicidae)  
CHEN Wei, WU Hua, MA Zhi-Qing, FENG Jun-Tao, ZHANG Xing
- 94 Screening of plant-derived synergistic agents for mosquito coil based on the bioefficacy against *Culex pipiens pallens* (Diptera: Culicidae)  
ZHANG Jie, LIU Hui, YANG Xiao-Wei, ZHANG Xing
- 209 Identification of cryptic species and detection of the susceptibility to cyantraniliprole and flupyradifurone of field populations of *Bemisia tabaci* (Hemiptera: Aleyrodidae) in Hainan, southern China  
GUO Lei, HUANG Xin-Yi, LIANG Yan-Po, LIU Xiang-Xiang, CHU Dong

- 218 Effects of fluvalinate on the quality of reared queens of the western honey bee, *Apis mellifera* (Hymenoptera: Apidae)  
LIAO Chun-Hua, ZHANG Bo, SHI Jing-Liang, WU Xiao-Bo
- 331 Biological activities of *Thymus vulgaris*, *Petroselinum sativum* and *Stachys lavandulifolia* extracts against adult *Callosobruchus maculatus* (Coleoptera: Bruchidae) (In English)  
Fahimeh HAMIDI, Ali MEHRVAR, Naser EIVAZIAN KARY, Hassan VALIZADEH
- 565 Electroantennogram and behavioral responses of *Ectropis grisescens* (Lepidoptera: Geometridae) to essential oils from three non-host plants  
ZHANG Fang-Mei, QIAO Li, PAN Peng-Liang, WANG Guo-Jun, YIN Jian, CHEN Li-Jun
- 698 Isolation and identification of insecticidal compounds from *Curcuma longa* roots against *Aphis craccivora* (Hemiptera: Aphididae) adults  
ZHANG Min, LIU Jia, FU Wei-Jie, DAI Guang-Hui
- 851 Bioefficacy of the combined application of entomopathogenic nematodes and thiamethoxam and its effects on the protective and detoxification enzyme activities in *Bradysia odoriphaga* (Diptera: Sciaridae) larvae  
WU Hai-Bin, GONG Qing-Tao, CHEN Zhen-Zhen, JIANG Li-Li, GONG Yi, XU Yong-Yu, SUN Rui-Hong
- 941 Screening of insecticidal activities of 126 plant essential oils or main components of essential oils against *Anaphothrips obscurus* (Thysanoptera: Thripidae)  
LU Xiao-Peng, WU Qiong, LI Mao-Long, LI San-Xing, MA Zhi-Qing, ZHANG Xing
- 950 Toxicity and hazard assessment of six neonicotinoid insecticides on *Osmia excavata* (Hymenoptera: Megachilidae)  
YUAN Rui, LI Li-Li, LI Chao, XIA Xiao-Ju, ZHENG Li, YU Yi, MEN Xing-Yuan
- 1404 Control efficacy of ozone water against *Bradysia odoriphaga* (Diptera: Sciaridae) larvae and its influence on the growth of Chinese chives  
HU Jing-Rong, SHI Cai-Hua, XU Bao-Yun, WEI Qi-Wen, XIE Wen, LI Chuan-Ren, ZHANG You-Jun
- ❖ **Ecology and Pest Management**
- 224 Screening of host plants preferred for oviposition by female adults of *Ostrinia furnacalis* (Lepidoptera: Crambidae) and their electrophysiological responses to volatile components of *Humulus scandens* (Cannabaceae)  
ZHANG Wen-Lu, WANG Wen-Qiang, BAI Shu-Xiong, ZHANG Tian-Tao, HE Kang-Lai, WANG Zhen-Ying
- 232 Effects of host plants on the feeding behavior and detoxification enzyme activities in *Hyphantria cunea* (Lepidoptera: Arctiidae) larvae  
LI Lu-Sha, YUAN Yu-Fei, WU Lei, CHEN Min
- 240 Effects of larval non-sibling egg cannibalism on reproductive performance in *Harmonia axyridis* (Coleoptera: Coccinellidae)  
SHEN Xin-Lan, SHA Xian-Lan, SHU Xiao-Han, LI Bao-Ping, MENG Ling
- 340 A life-history trait of the Asian corn borer, *Ostrinia furnacalis* (Lepidoptera: Pyralidae)-positive correlation between body weight and temperature  
HE Hai-Min, XIAO Liang, CHEN Qian-Wu, XUE Fang-Sen
- 348 Evaluation of reproductive disturbance to Chinese bumblebees by the European bumblebee, *Bombus terrestris* (Hymenoptera: Apidae)  
YUAN Xiao-Long, Muhammad NAEEM, ZHANG Hong, LIANG Cheng, HUANG Jia-Xing, AN Jian-Dong
- 458 Feeding behaviour of *Bactrocera minax* (Diptera: Tryptetidae) on male inflorescence of *Castanea mollissima* (Fagales: Fagaceae)  
HE Zhang-Zhang, HUA Deng-Ke, DU Tian-Hua, WANG Fu-Lian, GUI Lian-You
- 468 Effects of regional agricultural landscape pattern on the community of ladybeetles in wheat fields  
ZHANG Yong-Sheng, OUYANG Fang, MEN Xing-Yuan, GE Feng, YUAN Zhe-Ming

- 574 Comparison of volatiles released from the host *Juglans mandshurica* in different damaged states and the GC-EAD and behavioral responses of *Apriona germari* (Coleoptera: Cerambycidae) to these volatiles  
MA Yan, SHI Li-Yang, ZHAO Yi, XU Hua-Chao
- 585 Feeding preference and taxis behavior of adult *Holotrichia oblita* (Coleoptera: Scarabaeidae) on three plants  
Rizwangul ABDUKERIM, CAO Ya-Zhong, ZHANG Shuai, YIN Jiao, LI Xue, LI Ke-Bin
- 596 Formulation optimization of crop straw feed of *Tenebrio molitor* (Coleoptera: Tenebrionidae) based on extreme vertex mixing design method  
LI Xiao-Long, XIONG Xiao-Li, LI Ning
- 604 Mating behavior of *Sclerodermus guani* (Hymenoptera: Bethyridae)  
LUO Li-Lin, LI Li
- 704 Does body size of coccinellid predators (Coleoptera: Coccinellidae) influence their preference to eat well-defended prey? (In English)  
Priya PATEL, Bhupendra KUMAR, Dinesh KUMAR
- 860 Effects of pest insect feeding and mechanical damage on the defensive enzyme activities in leaves at different parts of kidney bean plants  
YUE Wen-Bo, ZHI Jun-Rui, LIU Li, YE Mao, ZHANG Xiang-Qian, ZENG Guang
- 871 Biological characteristics of the solanum mealybug, *Phenacoccus solani* (Hemiptera: Pseudococcidae)  
ZHI Fu-Ying, HUANG Fang, HUANG Jun, LI Wei-Di, LÜ Yao-Bin
- 957 Population fitness of the migratory brown planthopper, *Nilaparvata lugens* (Hemiptera: Delphacidae) in response to the change of geomagnetic field intensity  
LIU Rui-Ying, XIAO Zi-Jin, HE Jing-Lan, WAN Gui-Jun, PAN Wei-Dong, CHEN Fa-Jun
- 968 Effects of CO<sub>2</sub> enrichment on the biological characteristics of the red morph of the pea aphid, *Acyrtosiphon pisum* (Hemiptera: Aphididae)  
SUN Qian, ZHANG Ting-Wei, LÜ Yu-Qing, WEI Jun-Yu, LI Jing-Jing, LIU Chang-Zhong
- 976 Effects of *Lygus pratensis* (Hemiptera: Miridae) infestation on the nutrient contents and protective enzyme activities in host plants  
GOU Chang-Qing, SUN Peng, LIU Duan-Chun, Dilinuer AIMAITI, FENG Hong-Zu
- 984 Relationship between the adaptability of *Athetis lepigone* (Lepidoptera: Noctuidae) and the contents of nutrients and secondary metabolites in maize seedlings  
GUO Ting-Ting, MEN Xing-Yuan, YU Yi, GUO Wen-Xiu, ZHANG Si-Cong, SUN Ting-Lin, LI Li-Li
- 1040 Biological characteristics of *Leptopilina boulardi* (Hymenoptera: Figitidae) and the effects of its parasitism on the growth and development of *Drosophila melanogaster*  
ZHOU Si-Cong, CHEN Jia-Ni, PANG Lan, PAN Zhong-Qiu, SHI Min, HUANG Jian-Hua, CHEN Xue-Xin
- 1047 Effect of host plants on the movement rate and predation ability of *Neoseiulus bicaudus* (Mesostigmata: Phytoseiidae)  
ZHANG Yan-Nan, GU Jia-Min, CHEN Jing, WANG Pei-Ling, ZHANG Jian-Ping
- 1170 Effects of temperature on the growth, development and reproduction of *Phenacoccus solani* (Hemiptera: Pseudococcidae)  
LI Si-Yi, WANG Ji-Rui, LAI Qiu-Li, ZHANG Sheng-Juan, SHAO Wei-Dong, XU Zhi-Hong
- 1177 Effects of maternal starvation on the development and reproduction of the offspring of alate adults of *Sitobion avenae* (Hemiptera: Aphididae)  
LÜ Nan-Nan, SHI Qi, WU Jun-Xiang, XU Xiang-Li
- 1184 Identification of the trace sex pheromone components of *Conogethes punctiferalis* (Lepidoptera: Crambidae) female adults on maize and optimization of their ratio in sex pheromone lures used in maize fields  
XU Xiang, KONG De-Sheng, FENG Bo, QIAN Kai, DU Yong-Jun

- 1295 Effects of photoperiod and LED light on the behavior of *Henosepilachna vigintioctopunctata* (Coleoptera: Coccinellidae) adults  
FANG Mei, XIE Jian-Kun, ZHU Min, WANG Min, TU Xiao-Yun
- 1300 Feeding preference and adaptation of *Ectropis griseascens* (Lepidoptera: Geometridae) to different tea varieties and their relationship with nutritional components in leaves of tea plants  
GE Chao-Mei, ZHANG Jia-Xia, SUN Qin-Yu, YE Tao, XIA Xian-Jiang, ZHANG Ran, DING Yong
- 1310 Variation of the composition of attractants in lures for *Monochamus alternatus* (Coleoptera: Cerambycidae) in the field and its influence on trapping efficacy  
HU Qin, JIN Jing, DU Yong-Bin, FAN Jian-Ting
- 1414 Influence of fatty acids on the necrophoric behavior of the red imported fire ant, *Solenopsis invicta* (Hymenoptera: Formicidae)  
XU Yan-Qin, CHEN Li, WANG Wen-Kai
- 1421 Comparison of female reproductive fitness and offspring life history traits between gamogenesis and parthenogenesis in the camphor sawfly, *Mesoneura rufonota* (Hymenoptera: Tenthredinidae)  
XU Chuan-Feng, SHI Hao-Ni, YIN Li-Xin, ZHOU Jia-Ying, LIU Xing-Ping
- 1430 Effects of the mutualism between ants and lac insects and host plant diversity on various trophic levels of arthropods in lac plantation  
WANG Qing, LU Zhi-Xing, ZHAO Jing-Wen, CHEN You-Qing
- 1439 Diversity and stability of terrestrial insect community in different wetlands in Yinchuan, Ningxia, Northwest China  
HE Yun-Chuan, YANG Gui-Jun, WANG Xin-Pu
- ❖ **Evolution and Systematics**
- 103 Molecular phylogenetic relationships among forty species (subspecies) of the genus *Culex* (Diptera: Culicidae) from China  
SUN Ling, FU Wen-Bo, YAN Zhen-Tian, CHEN Bin
- 114 Sequencing and analysis of the complete mitochondrial genome of *Armigeres subalbatus* (Diptera: Culicidae)  
LI Xu-Dong, CHEN Bin
- 246 Sperm ultrastructure of *Euricania clara* Kato (Hemiptera: Fulgoroidea: Ricaniidae)  
JIANG Zhen, QIN Dao-Zheng
- 255 Foreground-background segmentation of lepidopteran specimen images based on fully convolutional networks  
ZHU Le-Qing, MA Meng-Yuan, ZHANG Zhen, MENG Zhao-Jun, WU Wei, REN Li-Li, GAO Cui-Qing, NAN Xiao-Ning
- 477 Analysis of the mitochondrial genome of *Attagenus unicolor japonicus* (Coleoptera: Dermestidae) and a phylogenetic analysis of Dermestidae  
LIN Ai-Li, LI Xin-Xin, ZHAO Xin-Cheng, SONG Nan
- 488 Molecular identification and phylogenetic analysis of 44 species of fleas in Qinghai Province, western China based on mtDNA COI gene sequence  
MA Ying, LI Hai-Long, HE Jian, ZHAO Yan-Mei, YANG Han-Qing, LU Liang, LIU Qi-Yong
- 498 Morphology and ultrastructure of female and male adults of *Culicoides arakawai* (Arakawa) (Diptera: Ceratopogonidae)  
JIANG Xiao-Hong, CHANG Qiong-Qiong, HOU Xiao-Hui
- 613 Analysis of genetic differentiation of different geographical populations of the melon fly, *Bactrocera cucurbitae* (Diptera: Tephritidae) in China based on microsatellite molecular markers  
ZHANG Ya-Nan, NIU Li-Ming, ZHOU Shi-Hao, GONG Zhi, LI Lei, ZHANG Fang-Ping, HAN Dong-Yin, FU Yue-Guan
- 712 Screening of microsatellite loci and the genetic diversity analysis of *Mythimna separata* (Lepidoptera: Noctuidae) populations in China  
LI Mei-Mei, LI Bo-Liao, WU Jun-Xiang, XU Xiang-Li

- 877 Morphological characteristics for instar identification of *Aphis glycines* ( Hemiptera: Aphididae)  
LI Hui, LIU Xiao-Xia, ZHI Hai-Jian, LI Kai, ZHANG Qing-Wen, LI Zhen
- 991 Sperm morphology of four cicada species ( Hemiptera: Cicadidae)  
CUI Bei-Bei, WEI Cong
- 1054 Analysis of the genetic diversity and host specialization of *Ostrinia furnacalis* ( Lepidoptera: Crambidae) in Northeast China  
WANG Ke-Qin, LIU Xing-Long, SHAO Tian-Yu
- 1067 Analysis of the diversity of host plants of Gracillariidae ( Lepidoptera) in China  
BAI Hai-Yan, TIE Jun, HOU Qin-Wen
- 1192 Observation of the antenna and antennal sensilla of adults of the leafhopper *Chlorotettix nigromaculatus* ( Hemiptera: Cicadellidae) with scanning electron microscope  
GUO Fu-Zhen, YUAN Shui-Xia, WANG He-Ran, GUO Ke-Jian
- 1202 Revision of scientific names and re-description of five important buprestid species ( Coleoptera: Buprestidae) in China  
WANG Xiao-Yi, CAO Liang-Ming, YANG Zhong-Qi
- 1319 Genetic diversity of mitochondrial cytochrome b gene of *Lucilia sericata* ( Diptera: Calliphoridae) populations in China and its implication in forensic medicine for speculating death location  
LIU Qin-Lai, XIU Shi-Peng, LÜ Pin, TANG Guang-Feng, ZHANG Jie, WANG Xiao-Jun, ZHAO Ying-Jian, SUN Wen-Ping
- 1453 Phylogenetic analysis of *Apis* ( Hymenoptera: Apidae) based on COI gene sequences and an evolutionary analysis of its dancing and nesting behavior  
REN Xiao-Xiao, HE Xing-Jiang, GONG Xue-Yang, ZHAO Wen-Zheng, LIU Yi-Qiu, DONG Kun
- 1462 Genetic diversity of *Apis cerana cerana* populations in the Yimeng Mountains, Shandong province, East China ( *In English*)  
CHI Xue-Peng, ZHANG Wei-Xing, WEI Wei, CHEN Wen-Feng, LI Zhen-Fang, XIA Zhen-Yu, YU Jing, LIU Jia-Xin, MA Lan-Ting, LIU Zhen-Guo, WANG Hong-Fang, XU Bao-Hua

## REVIEW ARTICLES

- 1 Vector biology and vector insects  
ZOU Zhen, KANG Le
- 122 Taxonomy and fauna of Culicidae: history and current knowledge  
FU Wen-Bo, CHEN Bin
- 360 Research and application of insect promoters  
TONG Xiao-Ling, SHI Jin, GAI Ting-Ting, FANG Chun-Yan, DAI Fang-Yin
- 371 Progress in targeted genome editing technology in the silkworm, *Bombyx mori*  
LONG Ding-Pei, HAO Zhan-Zhang, XIANG Zhong-Huai, ZHAO Ai-Chun
- 385 Advances in the research of arginine kinase in insects  
ZHENG Ya-Nan, LIU Pei-Xuan, SHI Yong, FAN Li-Chun
- 620 Research progress in bumblebee nutrition and feed  
WANG Huan, XU Xi-Lian
- 721 Research progress in the litchi fruit borer, *Conopomorpha sinensis* ( Lepidoptera: Gracillariidae)  
LI Wen-Jing, DONG Yi-Zhi, YAO Qiong, CHEN Bing-Xu
- 1076 Advances in biology, chemical ecology and control of the sycamore lace bug, *Corythucha ciliata* ( Hemiptera: Tingidae)  
LI Feng-Qi, FU Ning-Ning, ZHANG Lian-Zhong, JIAO Meng-Meng, PENG Ling-Fei, XU Yi-Hua, LUO Chen
- 1087 Advances in nocturnal pollinating moths  
YANG Xiao-Fei, ZHU Lin, LI Hou-Hun
- 1212 Antimicrobial and insecticidal activities and evolution of inhibitor cystine knot peptides  
ZHAO Jing-Ru, YUAN Shou-Li, GAO Bin, ZHU Shun-Yi



- 1222 Biosynthesis of isoprenoid aggregation pheromones in bark beetles ( Coleoptera: Scolytidae)  
FANG Jia-Xing, ZHANG Su-Fang, LIU Fu, ZHANG Zhen, KONG Xiang-Bo
- 1328 Progress in the molecular mechanisms underlying the regulation of innate immunity by 20-hydroxyecdysone in insects  
WANG Yuan, ZHANG Ruo-Nan, CHEN Xue, GU Ruo-Cheng, SU Rui, ZHONG Yang-Jin, YANG Wan-Ying
- 1340 Current research status of diapause hormone and its receptors regulating embryo diapause in the silkworm, *Bombyx mori*  
SHEN Zhang-Fei, XIE Hong-Qing, SHI Lian-Gen
- 1350 Progress in the regulating factors of behavioral transition between nurses and foragers in honeybees  
LIU Fang, SHI Teng-Fei, QI Lei
- 1472 Matrix metalloproteases in insects  
CHEN Kang-Kang, ZHANG Yi-Qiang, ZHU Qian-Ming, TANG Tai, WANG Ying-Juan, FENG Cong-Jing
- 1481 Progress and prospects of CRISPR system in the regulation of gene expression in insects  
LIU Su-Ning, LI Sheng, REN Chong-Hua
- 1488 Progresses in entomic ectosymbiotic microorganisms  
LIN Yong-Wen, HOU You-Ming

## SHORT COMMUNICATIONS

- 139 Binding characteristics of the odorant binding protein AsinOBP1 of *Anopheles sinensis* (Diptera: Culicidae) with the mosquito repellent DEET  
SHI Zong-Pan, RAN Yong-Hong, ZHANG Jing-Jing, ZHANG Jing, YAN Zhen-Tian, CHEN Bin, HE Zheng-Bo
- 505 Identification and pathogenicity test of a new soil-derived fungus strain of *Lecanicillium* to *Ephestia elutella* (Lepidoptera: Pyralidae)  
ZHOU Ye-Ming, ZHI Jun-Rui, ZHANG Xin, ZOU Xiao, YANG Kai
- 511 Effects of photoperiod on the population parameters of the sugarcane aphid, *Melanaphis sacchari* (Hemiptera: Aphididae)  
WU De-Gong, ZHAN Qiu-Wen, HUANG Bao-Hong, WANG Zeng-Xia, HUANG Wei-Dong, BI Ya-Ling, LIU Chang-Zhong, DU Jun-Li
- 733 Observation of the developmental pattern and morphological change of serosal cuticle in *Locusta migratoria* (Orthoptera: Acrididae) with an optimized paraffin section method  
LIU Wei-Wei, LI Ren-Jian, FU Sui-Ye, DONG Qing, ZHANG Min, ZHANG Xue-Yao, ZHANG Jian-Zhen, ZHANG Ting-Ting
- 741 Genetic differentiation and distribution of two sibling species of tea geometrids in tea-growing areas in Zhejiang, eastern China  
BAI Jia-He, WANG Zhi-Bo, XIAO Qiang
- 1097 Flight capacity test and trajectory analysis of long-distance dispersal of *Corythucha ciliata* (Hemiptera: Tingidae)  
LU Shao-Hui, WEI Mei-Cai, YUAN Guo-Jun, CUI Jian-Xin, MEI Xiang-Xin
- 1106 Occurrence characteristics of adults of the meadow moth, *Loxostege sticticalis* (Lepidoptera: Crambidae) in Altay, Xinjiang, northwestern China  
AZIGULI Abulizi, YASEN Shali, ZU Mi-Na, AMANGULI Tuniyazi, WU Le-Nian, XU Guang-Qing, ZHAO Li
- 1114 Identification of *Delia platura* (Diptera: Anthomyiidae) and its damage to corn seeds and seedlings in Xingtang, Hebei, northern China  
ZHANG Hai-Jian, SONG Jian, MA Hong-Xia, SHI Jie, HU Qing-Yu, WANG Zhen-Ying
- 1237 Molecular cloning and expression profiling of bursicon genes in the fruit fly *Zeugodacus tau* (Diptera: Tephritidae)  
ZHANG He-He, ZHANG Qi-Wen, LIN Jia, JI Qing-E, CHEN Jia-Hua
- 1356 An orange-eye mutant of the white backed planthopper, *Sogatella furcifera* (Hemiptera: Delphacidae) ( *In English*)  
GE Jia-Zhen, LOU Yu-Ting, ZHANG Chuan-Xi

# 本年度审稿专家和编委名单(按姓名拼音排序)

## Reviewers for articles in 2018 (listed in alphabetical order)

艾 辉	安春菊	安建东	柏立新	班丽萍	鲍艳原	卜文俊	彩万志	曹传旺	曹广力	曹雅忠
曹 阳	曹月青	曹志贱	曾爱平	曾凡荣	曾鑫年	曾志将	常岩林	陈 斌	陈 兵	陈大福
陈法军	陈建明	陈建群	陈巨莲	陈科伟	陈克平	陈 立	陈茂华	陈顺立	陈小琳	陈学新
陈玉银	陈珍珍	程道军	程家安	程罗根	迟德富	褚 栋	崔金杰	代平礼	戴仁怀	戴小华
董杜鹃	董胜张	董双林	杜喜翠	杜永均	杜予州	段立清	樊建庭	范青海	方继朝	方 燕
冯从经	冯启理	傅 强	高其康	高月波	巩中军	桂连友	桂仲争	郭建英	郭锡杰	韩宝瑜
郝家胜	郝蕙玲	郝树广	何光存	何康来	何晓芳	何学友	何正波	贺 虹	洪华珠	侯春生
侯茂林	侯有明	胡福良	胡好远	胡琼波	胡想顺	黄 俊	黄立华	黄龙全	黄青春	黄求应
黄少康	黄胜威	黄晓磊	黄新河	黄勇平	黄 振	嵇保中	吉爱红	吉 挺	季清娥	江幸福
姜卫华	姜玉锁	姜自锋	蒋杰贤	蒋明星	金道超	金丰良	孔海龙	孔祥波	黎路林	李 昌
李定旭	李 飞	李红亮	李后魂	李 虎	李建洪	李克斌	李 胜	李为争	李祥瑞	李学燕
李有志	李元喜	李兆英	李正西	李志红	梁爱萍	梁革梅	梁 沛	林 同	凌尔军	刘爱萍
刘德广	刘 芳	刘国平	刘浩宇	刘敬泽	刘 力	刘同先	刘 威	刘向东	刘小侠	刘星月
刘 杨	刘银泉	刘映红	刘永杰	刘 勇	刘雨芳	刘玉娣	刘泽文	刘长仲	刘忠渊	刘柱东
柳峰松	娄永根	陆碧茹	陆鹏飞	陆宴辉	陆永跃	吕要斌	吕昭智	吕志强	马 骏	马伟华
马雅军	门兴元	孟 玲	苗雪霞	莫建初	莫耀南	慕 卫	倪士峰	聂瑞娥	宁 君	潘敏慧
庞保平	庞 虹	彭文君	彭映辉	乔惠丽	秦启联	邱星辉	曲良建	任炳忠	任 东	任国栋
芮昌辉	桑 文	尚庆利	沈 杰	沈晋良	石福明	石旺鹏	史树森	史雪岩	司马杨虎	
孙江华	孙亮先	孙守慧	孙 涛	孙晓玲	孙修炼	孙 洋	孙玉诚	谭安江	谭江丽	汤清波
唐 斌	田 铃	童晓立	涂小云	万方浩	万树青	汪洋洲	王备新	王琛柱	王 丹	王德全
王殿轩	王 敦	王桂荣	王海鸿	王宏民	王华兵	王建军	王江峰	王江宁	王金星	王满园
王少丽	王四宝	王 甦	王宪辉	王小平	王小艺	王新谱	王彦华	王玉凤	王振营	王中康
魏洪义	魏建荣	魏美才	魏书军	魏兆军	文礼章	吴 刚	吴国星	吴 杰	吴 捷	吴青君
吴清发	吴伟坚	吴小波	吴益东	吴珍泉	吴忠道	伍一军	仵均祥	武三安	武淑文	武予清
奚耕思	夏庆友	夏晓峰	肖海军	谢映平	胥保华	徐环李	徐家萍	徐世清	徐书法	徐卫华
徐永镇	许国庆	许向利	许益鏊	许永玉	薛芳森	薛 明	闫凤鸣	颜伟玉	杨大荣	杨 定
杨国庆	杨茂发	杨明耀	杨世勇	杨之帆	姚洪渭	姚 青	叶恭银	叶 辉	殷幼平	尹 姣
尹新明	于彩虹	于 毅	余林生	虞国跃	袁德成	袁哲明	原国辉	岳巧云	翟 衡	詹 帅
张传溪	张大羽	张道川	张东升	张 帆	张飞萍	张国安	张吉斌	张继红	张建萍	张建珍
张俊争	张 蕾	张龙娃	张润志	张 帅	张天涛	张婷婷	张文庆	张 兴	张徐波	张永军
张友军	张云慧	张志芳	赵惠燕	赵 萍	赵小凡	赵新成	赵章武	郑火青	郑学礼	郑长英
邳军锐	钟伯雄	钟国华	钟海英	周冰峰	周福才	周 琼	周树堂	周忠实	朱道弘	朱 芬
朱家颖	朱健红	竺乐庆	宗世祥	邹 振						